

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-14 (Canceled).

Claim 15 (New): A catalyst for polymerizing α -olefin, comprising a combination of:
a component (A) that is a solid catalyst component comprising magnesium, titanium,
and a halogen as an essential component;

a component (B) that is an organoaluminum compound;

a component (C) that is a compound comprising a C(=O)N bond selected from the
group consisting of tetramethylurea, tetraethylurea, bis(tetramethylene)urea, N,N'-dimethyl-
N,N'-diphenylurea, 1,3-dimethyl-2-imidazolidinone, 1,3-dimethyl-3,4,5,6-tetrahydro-2(1H)-
pyrimidinone, N,N-dimethylpropionamide, 1,3-diacetyl-2-imidazolidinone, 1-methyl-2-
pyrrolidinone, 1-ethyl-2-pyrrolidinone, 1-dodecyl-2-pyrrolidinone, 1-cyclohexyl-2-
pyrrolidinone, 1-phenyl-2-pyrrolidinone, and N-methyl- ϵ -caprolactam; and

a component (D) that is a silicon compound or a compound having at least 2 ether
bonds.

Claim 16 (New): A production method for an α -olefin polymer, comprising
homopolymerizing or copolymerizing an α -olefin by contacting the α -olefin under
homopolymerizing or copolymerizing conditions with the catalyst of Claim 15.

Claim 17 (New): A catalyst for polymerizing α -olefin, comprising a combination of:
a component (A) that is a solid catalyst component comprising magnesium, titanium,
and a halogen as an essential component;

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to enter
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